Does Not Comply   1600
Corrected Diskette Needed

Errors on p. 3

RAW SEQUENCE LISTING   DATE: 05/13/2002
PATENT APPLICATION: US/09/469,200B TIME: 14:53:02

Input Set : A:\seq listing.txt
Output Set: N:\CRF3\05102002\I469200B.raw

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 3 <110> APPLICANT: Weigel, Paul H.
 4        DeAngelis, Paul
 5        Kumari, Kshama
 7 <120> TITLE OF INVENTION: Hyaluronan Synthase Gene and Uses Thereof
 9 <130> FILE REFERENCE: 3554.011
11 <140> CURRENT APPLICATION NUMBER: US 09/469,200B
12 <141> CURRENT FILING DATE: 1999-12-21
14 <150> PRIOR APPLICATION NUMBER: US 09/178,851
15 <151> PRIOR FILING DATE: 1998-10-26
17 <150> PRIOR APPLICATION NUMBER: US 60/064,435
18 <151> PRIOR FILING DATE: 1997-10-31
20 <160> NUMBER OF SEQ ID NOS: 10
22 <170> SOFTWARE: PatentIn version 3.1
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25 <211> LENGTH: 1254
26 <212> TYPE: DNA
27 <213> ORGANISM: Streptococcus equisimilis
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34 ctgatagctt acctattagt caaaatgtcc ttatcctttt tttacaagcc atttaaggga     180
36 agggctgggc aatataaggt tgcagccatt attccctctt ataacgaaga tgctgagtca     240
38 ttgctagaga ccttaaaaag tgttcagcag caaacctatc ccctagcaga aatttatgtt     300
40 gttgacgatg gaagtgctga tgagacaggt attaagcgca ttgaagacta tgtgcgtgac     360
42 actggtgacc tatcaagcaa tgtcattgtt catcggtcag agaaaaatca aggaaagcgt     420
44 catgcacagg cctgggcctt tgaaagatca gacgctgatg tcttttgac cgttgactca      480
46 gatacttata tctaccctga tgctttagag gagttgttaa aaacctttaa tgacccaact     540
48 gtttttgctg cgacgggtca ccttaatgtc agaaatagac aaaccaatct cttaacacgc     600
50 ttgacagata ttcgctatga taatgctttt ggcgttgaac gagctgccca atccgttaca     660
52 ggtaatatcc ttgtttgctc aggtccgctt agcgtttaca gacgcgaggt ggttgttcct     720
54 aacatagata gatacatcaa ccagaccttc ctgggtattc ctgtaagtat tggtgatgac     780
56 aggtgcttga ccaactatgc aactgattta ggaaagactg tttatcaatc cactgctaaa     840
58 tgtattacag atgttcctga caagatgtct acttacttga agcagcaaaa ccgctggaac     900
60 aagtccttct ttagagagtc cattatttct gttaagaaaa tcatgaacaa tccttttgta     960
62 gccctatgga ccatacttga ggtgtctatg tttatgatgc ttgtttattc tgtggtggat    1020
64 ttctttgtag gcaatgtcag agaatttgat tggctcaggg ttttagcctt tctggtgatt    1080
66 atcttcattg ttgccctgtg tcggaacatt cattacatgc ttaagcaccc gctgtccttc    1140
68 ttgttatctc cgtttatgg ggtgctgcat ttgtttgtcc tacagccctt gaaattatat    1200
70 tctctttta ctattagaaa tgctgactgg ggaacacgta aaaaattatt ataa           1254
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74 <211> LENGTH: 417
75 <212> TYPE: PRT
76 <213> ORGANISM: Streptococcus Equisimilis
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RAW SEQUENCE LISTING
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85              20                  25                  30
88 Ser Leu Ser Ile Tyr Gly Phe Leu Leu Ile Ala Tyr Leu Leu Val Lys
89          35                  40                  45
92 Met Ser Leu Ser Phe Phe Tyr Lys Pro Phe Lys Gly Arg Ala Gly Gln
93      50                  55                  60
96 Tyr Lys Val Ala Ala Ile Ile Pro Ser Tyr Asn Glu Asp Ala Glu Ser
97 65                  70                  75                  80
100 Leu Leu Glu Thr Leu Lys Ser Val Gln Gln Gln Thr Tyr Pro Leu Ala
101              85                  90                  95
104 Glu Ile Tyr Val Val Asp Asp Gly Ser Ala Asp Glu Thr Gly Ile Lys
105              100                 105                 110
108 Arg Ile Glu Asp Tyr Val Arg Asp Thr Gly Asp Leu Ser Ser Asn Val
109      .115                 120                 125
112 Ile Val His Arg Ser Glu Lys Asn Gln Gly Lys Arg His Ala Gln Ala
113      130                 135                 140
116 Trp Ala Phe Glu Arg Ser Asp Ala Asp Val Phe Leu Thr Val Asp Ser
117 145                 150                 155                 160
120 Asp Thr Tyr Ile Tyr Pro Asp Ala Leu Glu Glu Leu Leu Lys Thr Phe
121              165                 170                 175
124 Asn Asp Pro Thr Val Phe Ala Ala Thr Gly His Leu Asn Val Arg Asn
125              180                 185                 190
128 Arg Gln Thr Asn Leu Leu Thr Arg Leu Thr Asp Ile Arg Tyr Asp Asn
129          195                 200                 205
132 Ala Phe Gly Val Glu Arg Ala Ala Gln Ser Val Thr Gly Asn Ile Leu
133      210                 215                 220
136 Val Cys Ser Gly Pro Leu Ser Val Tyr Arg Arg Glu Val Val Val Pro
137 225                 230                 235                 240
140 Asn Ile Asp Arg Tyr Ile Asn Gln Thr Phe Leu Gly Ile Pro Val Ser
141              245                 250                 255
144 Ile Gly Asp Asp Arg Cys Leu Thr Asn Tyr Ala Thr Asp Leu Gly Lys
145              260                 265                 270
148 Thr Val Tyr Gln Ser Thr Ala Lys Cys Ile Thr Asp Val Pro Asp Lys
149      275                 280                 285
152 Met Ser Thr Tyr Leu Lys Gln Gln Asn Arg Trp Asn Lys Ser Phe Phe
153      290                 295                 300
156 Arg Glu Ser Ile Ile Ser Val Lys Lys Ile Met Asn Asn Pro Phe Val
157 305                 310                 315                 320
160 Ala Leu Trp Thr Ile Leu Glu Val Ser Met Phe Met Met Leu Val Tyr
161              325                 330                 335
164 Ser Val Val Asp Phe Phe Val Gly Asn Val Arg Glu Phe Asp Trp Leu
165              340                 345                 350
168 Arg Val Leu Ala Phe Leu Val Ile Ile Phe Ile Val Ala Leu Cys Arg
169          355                 360                 365
172 Asn Ile His Tyr Met Leu Lys His Pro Leu Ser Phe Leu Leu Ser Pro
173          370                 375                 380
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176 Phe Tyr Gly Val Leu His Leu Phe Val Leu Gln Pro Leu Lys Leu Tyr
177 385             390             395             400
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181             405             410             415
184 Leu
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189 <211> LENGTH: 22
190 <212> TYPE: DNA
191 <213> ORGANISM: Synthetic
193 <400> SEQUENCE: 3
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198 <211> LENGTH: 20
199 <212> TYPE: DNA
200 <213> ORGANISM: Synthetic
202 <400> SEQUENCE: 4
203 atcaaattct ctgacattgc                                          20
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207 <211> LENGTH: 20
208 <212> TYPE: DNA
209 <213> ORGANISM: Synthetic
211 <400> SEQUENCE: 5
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217 <212> TYPE: DNA
218 <213> ORGANISM: Synthetic
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226 <212> TYPE: DNA
227 <213> ORGANISM: Paramecium bursaria chlorella virus
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232 tcataacttc aaatctaatc gcggttggag gagcctctct aatcttggct ccggcaatta 120
234 ctgggtatgt tctacattgg aatattgctc tctcgacaat ctggggagta tcagcttatg 180
236 gtattttcgt ttttgggttt ttccttgcac aagtttttatt ttcagaactg aacaggaaac 240
238 gtcttcgcaa gtggatttct ctcagaccta agggttggaa tgatgttcgt ttggctgtga 300
240 tcattgctgg atatcgcgag gatccttata tgttccagaa gtgcctcgag tctgtacgtg 360
242 actctgatta tggcaacgtt gcccgtctga tttgtgtgat tgacggtgat gaggacgatg 420
244 atatgaggat ggctgccgtt tacaaggcga tctacaatga taatatcaag aagcccgagt 480
246 ttgttctgtg tgagtcagac gacaaggaag gtgaacgcat cgactctgat ttctctcgcg 540
248 acatttgtgt cctccagcct catcgtggaa aacgggagtg tctttatact gggtttcaac 600
250 ttgcaaagat ggaccccagt gtcaatgctg tcgttctgat tgacagcgat accgttctcg 660
252 agaaggatgc tattctggaa gttgtatacc cacttgcatg cgatcccgag atccaagccg 720
254 ttgcaggtga gtgtaagatt tggaacacag acactctttt gagtcttctc gtcgcttggc 780
256 ggtactattc tgcgttttgt gtggagagga gtgcccagtc ttttttcagg actgttcagt 840
258 gcgttggggg gccactgggt gcctacaaga ttgatatcat taaggagatt aaggacccct 900
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[handwritten: invalid response, see error summary sheet item 10]

RAW SEQUENCE LISTING   DATE: 05/13/2002
PATENT APPLICATION: US/09/469,200B   TIME: 14:53:02

Input Set : **A:\seq listing.txt**
Output Set: **N:\CRF3\05102002\I469200B.raw**

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260 ggatttccca gcgctttctt ggtcagaagt gtacttacgg tgacgaccgc cggctaacca    960
262 acgagatctt gatgcgtggt aaaaaggttg tgttcactcc atttgctgtt ggttggtctg   1020
264 acagtccgac caatgtgttt cggtacatcg ttcagcagac ccgctggagt aagtcgtggt   1080
266 gccgcgaaat ttggtacacc ctcttcgccg cgtggaagca cggtttgtct ggaatttggc   1140
268 tggcctttga atgtttgtat caaattacat acttcttcct cgtgatttac ctctttctc    1200
270 gcctagccgt tgaggccgac cctcgcgccc agacagccac ggtgattgtg agcaccacgg   1260
272 ttgcattgat taagtgtggg tatttttcat tccgagccaa ggatattcgg gcgttttact   1320
274 ttgtgcttta tacatttgtt tacttttct gtatgattcc ggccaggatt actgcaatga    1380
276 tgacgctttg ggacattggc tggggtactc gcggtggaaa cgagaagcct tccgttggca   1440
278 cccgggtcgc tctgtgggca aagcaatatc tcattgcata tatgtggtgg gccgcggttg   1500
280 ttggcgctgg agtttacagc atcgtccata actggatgtt cgattggaat tctctttctt   1560
282 atcgttttgc tttggttggt atttgttctt acattgtttt tattgttatt gtgctggtgg   1620
284 tttatttcac cggcaaaatt acgacttgga atttcacgaa gcttcagaag gagctaatcg   1680
286 aggatcgcgt tctgtacgat gcaactacca atgctcagtc tgtgtgattt ttcctgcaag   1740
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290 <211> LENGTH: 2937
291 <212> TYPE: DNA
292 <213> ORGANISM: Pastuerella Multocida
294 <400> SEQUENCE: 8
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299 gttgaatttc aaattaccaa atgcaaagaa aaactctcag cacatccttc tgttaattca    180
301 gcacatcttt ctgtaaataa agaagaaaaa gtcaatgttt gcgatagtcc gttagatatt    240
303 gcaacacaac tgttactttc caacgtaaaa aaattagtac tttctgactc ggaaaaaaac    300
305 acgttaaaaa ataaatggaa attgctcact gagaagaaat ctgaaaatgc ggaggtaaga    360
307 gcggtcgccc ttgtaccaaa agattttccc aaagatctgg ttttagcgcc tttacctgat    420
309 catgttaatg attttacatg gtacaaaaag cgaaagaaaa gacttggcat aaaacctgaa    480
311 catcaacatg ttggtctttc tattatcgtt acaacattca atcgaccagc aattttatcg    540
313 attacattag cctgtttagt aaaccaaaaa acacattacc cgtttgaagt tatcgtgaca    600
315 gatgatggta gtcaggaaga tctatcaccg atcattcgcc aatatgaaaa taaattggat    660
317 attcgctacg tcagacaaaa agataacggt tttcaagcca gtgccgctcg gaatatggga    720
319 ttacgcttag caaaatatga ctttattggc ttactcgact gtgatatggc gccaaatcca    780
321 ttatgggttc attcttatgt tgcagagcta ttagaagatg atgatttaac aatcattggt    840
323 ccaagaaaat acatcgatac acaacatatt gacccaaaag acttcttaaa taacgcgagt    900
325 ttgcttgaat cattaccaga agtgaaaacc aataatagtg ttgccgcaaa aggggaagga    960
327 acagtttctc tggattggcg cttagaacaa ttcgaaaaaa cagaaaatct ccgcttatcc   1020
329 gattcgcctt tccgtttttt tgcggcgggt aatgttgctt tcgctaaaaa atggctaaat   1080
331 aaatccggtt tctttgatga ggaatttaat cactggggtg gagaagatgt ggaatttgga   1140
333 tatcgcttat tccgttacgg tagtttcttt aaaactattg atggcattat ggcctaccat   1200
335 caagagccac caggtaaaga aaatgaaacc gatcgtgaag cgggaaaaaa tattacgctc   1260
337 gatattatga gagaaaaggt ccettatatc tatagaaaac ttttaccaat agaagattcg   1320
339 catatcaata gagtaccttt agtttcaatt tatatcccag cttataactg tgcaaactat   1380
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345 cctagggtac gcatcatgtc taaaccaaat ggcggaatag cctcagcatc aaatgcagcc   1560
347 gtttcttttg ctaaaggtta ttacattggg cagttagatt cagatgatta tcttgagcct   1620
349 gatgcagttg aactgtgttt aaaagaattt ttaaaagata aaacgctagc ttgtgtttat   1680
351 accactaata gaaacgtcaa tccggatggt agcttaatcg ctaatggtta caattggcca   1740
353 gaattttcac gagaaaaact cacaacggct atgattgctc accactttag aatgttcacg   1800
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Input Set : A:\seq listing.txt
Output Set: N:\CRF3\05102002\I469200B.raw

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355 attagagctt ggcatttaac tgatggattc aatgaaaaaa ttgaaaatgc cgtagactat 1860
357 gacatgttcc tcaaactcag tgaagttgga aaatttaaac atcttaataa aatctgctat 1920
359 aaccgtgtat tacatggtga taacacatca attaagaaac ttggcattca aaagaaaaac 1980
361 cattttgttg tagtcaatca gtcattaaat agacaaggca taacttatta taattatgac 2040
363 gaatttgatg atttagatga aagtagaaag tatattttca ataaaaccgc tgaatatcaa 2100
365 gaagagattg atatcttaaa agatattaaa atcatccaga ataaagatgc caaaatcgca 2160
367 gtcagtattt tttatcccaa tacattaaac ggcttagtga aaaaactaaa caatattatt 2220
369 gaatataata aaaatatatt cgttattgtt ctacatgttg ataagaatca tcttacacca 2280
371 gatatcaaaa aagaaatact agccttctat cataaacatc aagtgaatat tttactaaat 2340
373 aatgatatct catattacac gagtaataga ttaataaaaa ctgaggcgca tttaagtaat 2400
375 attaataaat taagtcagtt aaatctaaat tgtgaataca tcatttttga taatcatgac 2460
377 agcctattcg ttaaaaatga cagctatgct tatatgaaaa aatatgatgt cggcatgaat 2520
379 ttctcagcat taacacatga ttggatcgag aaaatcaatg cgcatccacc atttaaaaag 2580
381 ctcattaaaa cttattttaa tgacaatgac ttaaaaagta tgaatgtgaa agggcatca 2640
383 caaggtatgt ttatgacgta tgcgctagcg catgagcttc tgacgattat taaagaagtc 2700
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387 caatttgcac ttttaatctt agaaaagaaa accggccatg tatttaataa aacatcgacc 2820
389 ctgacttata tgccttggga acgaaaatta caatggacaa atgaacaaat tgaaagtgca 2880
391 aaaagaggag aaaatatacc tgttaacaag ttcattatta atagtataac tctataa 2937
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395 <211> LENGTH: 972
396 <212> TYPE: PRT
397 <213> ORGANISM: Pastuerella Multocida
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406   20   25   30
409 Lys Ile Val Glu Phe Gln Ile Thr Lys Cys Lys Glu Lys Leu Ser Ala
410   35   40   45
413 His Pro Ser Val Asn Ser Ala His Leu Ser Val Asn Lys Glu Glu Lys
414   50   55   60
417 Val Asn Val Cys Asp Ser Pro Leu Asp Ile Ala Thr Gln Leu Leu Leu
418 65   70   75   80
421 Ser Asn Val Lys Lys Leu Val Leu Ser Asp Ser Glu Lys Asn Thr Leu
422   85   90   95
425 Lys Asn Lys Trp Lys Leu Leu Thr Glu Lys Lys Ser Glu Asn Ala Glu
426   100   105   110
429 Val Arg Ala Val Ala Leu Val Pro Lys Asp Phe Pro Lys Asp Leu Val
430   115   120   125
433 Leu Ala Pro Leu Pro Asp His Val Asn Asp Phe Thr Trp Tyr Lys Lys
434   130   135   140
437 Arg Lys Lys Arg Leu Gly Ile Lys Pro Glu His Gln His Val Gly Leu
438 145   150   155   160
441 Ser Ile Ile Val Thr Thr Phe Asn Arg Pro Ala Ile Leu Ser Ile Thr
442   165   170   175
445 Leu Ala Cys Leu Val Asn Gln Lys Thr His Tyr Pro Phe Glu Val Ile
446   180   185   190
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VERIFICATION SUMMARY   DATE: 05/13/2002
PATENT APPLICATION: **US/09/469,200B**   TIME: 14:53:04

Input Set : **A:\seq listing.txt**
Output Set: **N:\CRF3\05102002\I469200B.raw**